

DELAWARE VALLEY

REGIONAL PLANNING COMMISSION

Penn Towers Building, 1819 J.E. Kennedy Blvd., Philadelphia, Penna. 19103 Locust 7-3000

January 31, 1974

Mr. Carmen F. Guarino, Commissioner  
Philadelphia City Water Department  
1160 Municipal Services Building  
Philadelphia, Pennsylvania 19107

Dear Mr. Guarino:

As the areawide agency designated to perform the metropolitan clearinghouse function under the provisions of the Office of Management and Budget Circular A-95 Revised, the Delaware Valley Regional Planning Commission hereby acknowledges receipt of your application for federal financial assistance.

It is a pleasure to inform you that at its meeting on January 30, 1974, the Board endorsed the recommendations of its advisory committees and staff as set forth in the attached Commission Staff Review Statement for the below listed project:

Wastewater Treatment Works Construction Program

City of Philadelphia, Southwest Treatment Plant - to expand and upgrade the existing Philadelphia Southwest Sewage Treatment Plant; estimated total project cost \$84,825,000, (72-126-5). (Note: Review pending since 1972 awaiting Water Quality Management permit. Permit has now been issued.)

Please note that you are required to include with the completed application any comments and recommendations made by or through the clearinghouse along with a statement that such comments have been considered prior to submission of the application.

Sincerely yours,

Walter K. Johnson  
Executive Director

WKJ:ar

enclosure

cc: Kenneth J. Zitomer, Deputy Water Commissioner, City of Philadelphia  
Philip Carroll, Deputy Mayor, City of Philadelphia  
Lawrence Stoltz, Metropolitan Coordinator, City of Philadelphia  
Richard A. Heiss, Pennsylvania State Review Coordinator, PNBS

# DELAWARE VALLEY REGIONAL PLANNING COMMISSION

## REGIONAL CLEARINGHOUSE

### Staff Review of the City of Philadelphia's Application for the Expansion and Upgrading the Southwest Treatment Plant

#### I. BACKGROUND

##### A. Basic Information

1. Name of Applicant: City of Philadelphia
2. Address: Philadelphia Water Department  
1160 Municipal Services Building
3. Principal Contacts: Carmen F. Guarino, Commissioner  
Philadelphia City Water Department  
  
George Varvoutis  
Executive Director  
Delaware County Planning Commission  
  
Richard A. Heiss  
State Coordinator, PNRS  
  
Christian T. Beechwood  
Regional Sanitary Engineer  
Pennsylvania Department of  
Environmental Resources  
  
Theodore Briganti,  
Project Review Branch  
Delaware River Basin Commission
4. Project Location: The present plant is located at  
Penrose Avenue just northeast of the  
Philadelphia International Airport,  
Philadelphia, Pa. (see attached map).
5. Project Description: U.S. Environmental Protection Agency  
construction grant application to  
expand and upgrade the existing  
Philadelphia southwest sewage treat-  
ment plant to a capacity of 210 mgd.  
  

Federal Grant	\$50,895,000
Non Federal Grant	\$33,930,000
Total Cost	<u>\$84,825,000</u>



## B. File Information

1. Date notification received by DVRPC: 2/4/72
2. Date notification qualified: 2/4/72
3. Date application received: 10/2/72
4. Date application qualifies: 1/14/74
5. Date review complete: 1/14/74
6. Review by: Dennis Dahlem, Review Officer, Sewer & Water and  
John Coscia, P.E. Chief, Environmental Planning
7. Regional Clearinghouse: 1/15/74

## II. PROJECT DESCRIPTION

The existing Southwest Philadelphia plant is designed to serve the needs of a population of 913,000. Many of these people reside outside the City. The proposed service area for the expanded plant will consist of a total of 115,800 acres as follows:

- (1) 51,600 acres now served by the Southwest Plant, composed of 27,200 acres in the City (or 1/3 of the city area) plus 24,200 areas in the Township of Springfield and Lower Merion in Montgomery County, and Upper Darby Township in Delaware County.
- (2) 52,200 acres in Eastern Delaware County now served by plants in Delaware County that are scheduled to be phased out.
- (3) 12,000 acres in Montgomery County adjacent to the City in the Wissahickon drainage basin not presently served by the City.

The proposed plant expansion, which will be constructed on the present site, will add new secondary treatment facilities designed to meet the required water quality standards of the Delaware River under estimated 1990 plant loading conditions. The existing primary treatment facilities at the Southwest Plant consist of a pumping station, bar screens, grit chambers, aerated flocculation tanks, primary sedimentation tanks, separate sludge treatment and disposal facilities consisting of concentrators, preheaters, primary and secondary digestors, centrifuges, and scum incinerators.

The secondary facilities are proposed to provide activated sludge treatment with pure oxygen aeration (UNOX). The proposed secondary facilities will consist of ten four stage aeration tanks with on-site oxygen generation; twenty final sedimentation tanks; a final effluent pumping facilities equipped with tide gates; chlorination facilities; and provision for connections to tertiary treatment facilities, if required in the future. Proposed facilities also include additional generators to assure sufficient emergency power to maintain all essential plant facilities and services. The facilities are to be arranged to permit further expansion with addition of tertiary facilities if required beyond the design year 1990 to accommodate the expected population and industrial growth in the service area to the year 2020.

The new plant will be designed to treat 118 mgd of sewage from the city and 92 mgd of sewage from the suburbs in 1990. The 1971 flow (and also design capacity) at the plant was 136 mgd.



### III. CONSISTENCY WITH REGIONAL PLANNING

The proposed project is consistent with the Regional Water Pollution Control Plan and planning process. The project achieves the regional objectives in this portion of the region in that:

- (1) The proposed expansion is designed to accommodate the future growth projected for the service area. The Southwest Philadelphia plant will serve a population equivalent of 1,355,000, and this capacity is sufficient to the design year 1990. Capacity is not directly related to the population served because of the large amount of industrial wastes. The facilities are to be arranged to permit expansion of their capacity beyond 1990 to accommodate the expected population and industrial growth in the service area to the year 2020, when the capacity is expected to be 285 mgd.
- (2) The proposed treatment plant will provide a 91% reduction of the BOD in 1976 when the new facilities are fully operational and 94% in 1990, which meets the water quality standards of Pennsylvania and the Delaware River Basin Commission.
- (3) The Southwest Sewage Treatment Plant has been designated by DVRPC to be the regional pollution control plant with the responsibility of providing treatment capacity on an equitable basis, for those areas programmed to be served under this expansion. The areawide approach developed by the applicant will provide adequate treatment capacity for the areas designated above and this expansion does implement the regional plan for this portion of the region.
- (4) The proposed facilities will provide an economically feasible solution for meeting the present and future water pollution control needs of the area. Estimated construction time to complete and place the project in operation is 730 calendar days.
- (5) The facilities and service area are generally consistent with the regional and local land use and development plans.

### IV. INTERGOVERNMENTAL COORDINATION

The Pennsylvania Department of Environmental Resources on October 1, 1973 approved the proposed project and issued a water quality management permit (#5172419) authorizing the construction of the proposed facility.

The Delaware River Basin Commission has approved the project and issued DOCKET No. D-70-53 CP authorizing construction of the proposed facility.

The Philadelphia City Planning Commission expressed its endorsement of the project. The funds for the construction work were placed in the first year of the 1973-1978 Capital Program.

The Montgomery County Planning Commission endorsed the application on the assurance that the plant will have capacity to treat Montgomery County flows through 1979, as projected in the 1971 Montgomery County Sewage Facilities Plan. The Delaware County Planning Commission is in full support of the application, as it provides

for the additional capacity of wastewater treatment at the Southwest Plant into which the Darby Creek Bypass will discharge.

#### V. ENVIRONMENTAL IMPACT

The completion of the project will improve the water quality of the Delaware River in accordance with the DRBC Comprehensive Plan. The completion of the project will satisfy joint orders of the Commonwealth of Pennsylvania and the DRBC for upgrading of treatment of the plant. These orders were issued in June - July 1968.

#### VI. HOUSING IMPACT

The proposed project will serve the anticipated population increase discussed above in Section III-1. The expansion of the plant will enable new areas to be served and existing homes with on-site sewage to be connected to public sewers. New service areas will in part, facilitate the construction of the number of housing units necessary to accommodate the projected population increase.

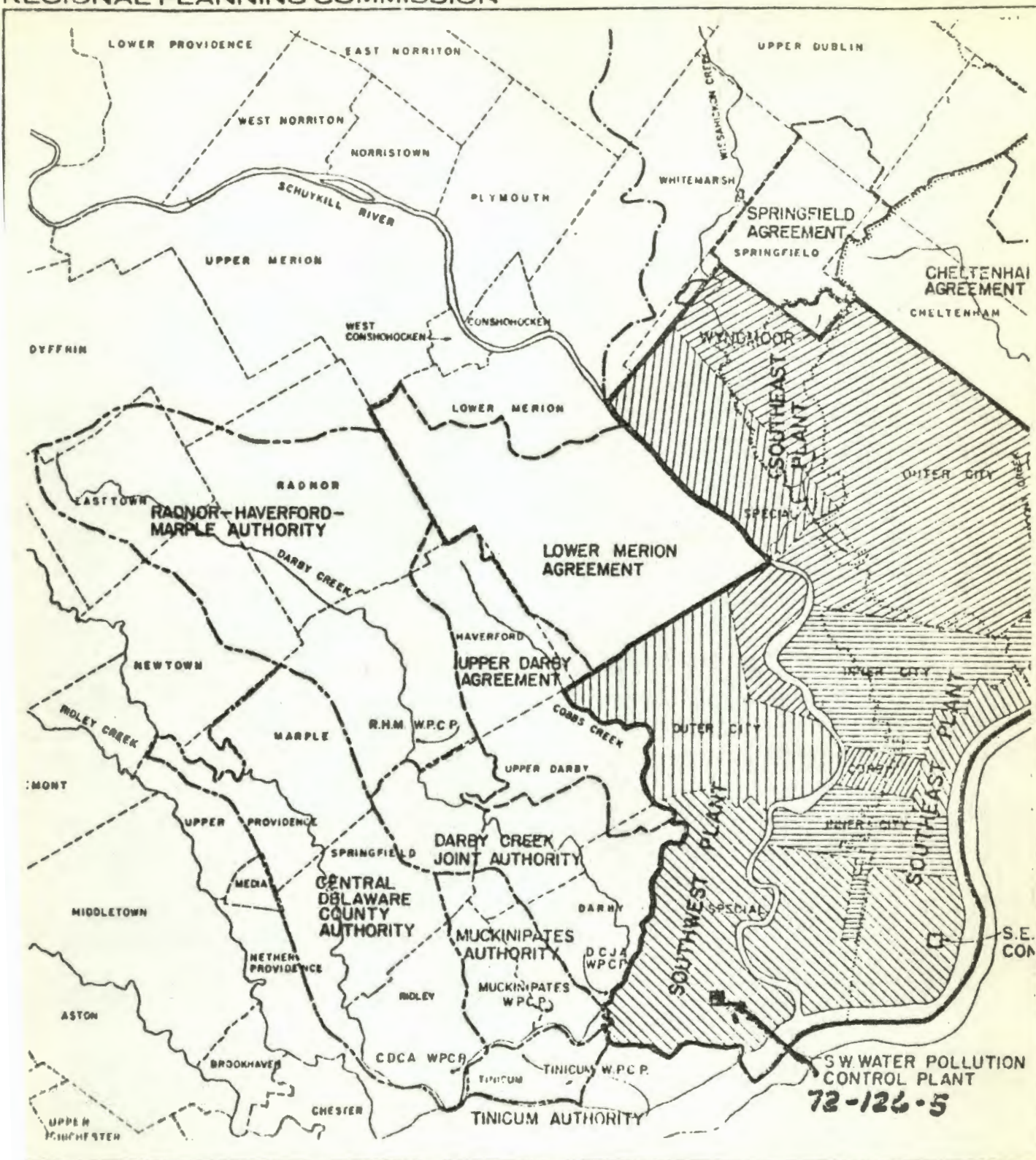
#### VII. COMMENTS

The staff finds the project consistent with the Delaware Valley Comprehensive Plans and planning process, and recommends endorsement of the proposed project.



DELAWARE VALLEY  
REGIONAL PLANNING COMMISSION

NUMBER



PLICATION AGENCY:

City of Philadelphia

E OF PROJECT:

## Expand and Upgrade Sewage Treatment Plant

ERAL FUNDING PROGRAM:

## Wastewater Treatment Works Construction Program

SCALE: 1" = 2 3/4 miles



NORTH